

Amendments to the Claims

Claim 1 (Currently amended): A powdered composition which reacts in water to form one or more peroxycarboxylic acids, RCOOOH , where $\text{R}=\text{H}$ or $\text{C}_2\text{-C}_4$ alkyl, straight chain, branched chain or cyclic (other than peracetic acid) in an anti-microbial effective concentration, providing surface disinfection/sterilization of human and animal skin, tissue and body cavities; and medical devices/instruments, comprising:

a perborate, one or more acyl and/or aroyl donors which form a peracid of one carbon, and/or greater than two carbons; and
a buffering system which upon mixing with water allows the pH to rise to about 9 for a rapid formation of one or more peroxycarboxylic acids and then drop to from about 7.0 to about 8.0 within an hour for sustained stability and microbial kill.

Claim 2 (Original): The composition of claim 1 which is from about 20% by weight to about 50% by weight of a Group I metal perborate.

Claim 3 (Original): The composition of claim 2 which is from about 40% by weight to about 45% by weight of a Group I metal perborate.

Claim 4 (Original): The composition of claim 2 wherein the Group I metal is sodium.

Claim 5 (Original): The composition of claim 3 wherein the Group I metal is sodium.

Claim 6 (Original): The composition of claim 1 wherein the amount of one or more acyl and/or aroyl donors is from 1% by weight to 50% by weight of the composition.

Claim 7 (Original): The composition of claim 6 wherein the amount of one or more acyl and/or aroyl donors is from 40% by weight to 45% by weight of the composition.

Claim 8 (Original): The composition of claim 1 wherein the buffering system is a combination of monobasic, dibasic and/or tribasic sodium phosphate, either as hydrates and/or anhydrous salts.

Claim 9 (Original): The composition of claim 8 wherein the buffering system consists of Sodium phosphate monobasic (monohydrate) from 5% by weight to 15% by weight of the composition.

Claim 10 (Currently amended): The combination composition of claim 1 which includes further comprising a surfactant ~~which facilitates microbial kill.~~

Claim 11 (Currently amended): The composition of claim 2-10 wherein the surfactant is an alkylaryl sulfonate.

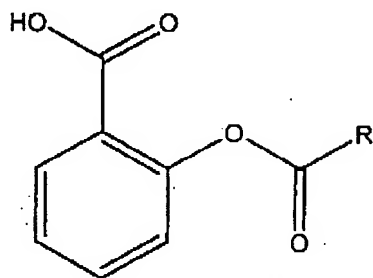
Claim 12 (Original): The composition of claim 11 wherein the amount of surfactant is from 0.005% by weight to 1.0% by weight of the composition.

Claim 13 (Original): The composition of claim 12 wherein the amount of surfactant is from 0.01% to 0.5% by weight of the composition.

Claim 14 (Currently amended): The composition of claim 10 ~~which includes further comprising~~ minors selected from the group consisting of corrosion inhibitors, sequestrants, stabilizers, odorants and dyes.

Claim 15 (Currently amended): The composition of claim ~~14~~ wherein the amount of minors is from 0.001% by weight to 5.0% by weight of the composition.

Claim 16 (Currently amended): The powdered composition which reacts in water to form one or more peroxycarboxylic acids in an anti-microbial effective concentration providing surface disinfection/sterilization of human and animal skin, tissue and body cavities; and medical devices/instruments, comprising:
from about 20% by weight to about 50% by weight of sodium perborate;
from about 1% by weight to 50% by weight of one or more acyl donors of the formula:

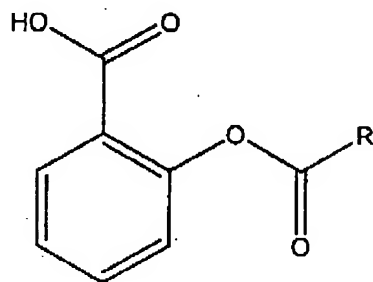


wherein R is C₂-C₄₀ alkyl, straight chained, branched, or cyclic, and from about 1% to 30% by weight of a buffering system which consists of a combination of monobasic, dibasic and/or tribasic sodium phosphate, either as hydrates and/or anhydrous salts; and from about 0.005% to 1.0% by weight of an alkylaryl sulfonate surfactant.

Claim 17 (Currently amended): The composition of claim 16 which has a D-value of six minutes or less at or below 60 ~~degree C~~ degrees °C for disinfection/sterilization of medical devices/instruments.

Claim 18 (Original): The composition of claim 17 wherein the alkylaryl sulfonate surfactant is the sodium salt of dodecylbenzenesulfonic acid.

Claim 19 (Currently amended): The method of forming peroxycarboxylic acids for use as a germicide comprising: reacting novel acyl donors of the formula:



wherein R is C₂-C₄₀, alkyl, straight chained, branched, or cyclic with a Group I perborate salt to generate in situ peroxycarboxylic acids.

Claim 20 (Original): The method of claim 19 wherein the Group I perborate salt is sodium perborate.